



NAME Vacant	MCR I
CLASSIFICATION Engineer, Civil (Limited Term)	POSITION NUMBER 538-103-3130-910
WORKING TITLE Civil Engineer	DIVISION/UNIT California Geological Survey/CSMIP
EFFECTIVE DATE	LOCATION Sacramento
BARGAINING UNIT R09	CONFLICT OF INTEREST CATEGORY 3 & 7

DEPARTMENT STATEMENT: All employees are responsible for contributing to an inclusive, safe, and secure work environment that values diverse cultures, perspectives, and experiences, and is free from discrimination. You are expected to work cooperatively with team members and others to enable the Department to provide the highest level of service possible. Your efforts to maintain regular attendance and treat others fairly, honestly, and with respect are critical to the success of the Department's mission and vision.

GENERAL STATEMENT: Under the supervision of the Senior Civil Engineer, (Supervisor of the Data Utilization and Structure Response Unit), the Civil Engineer is responsible for performing engineering analyses and tasks utilizing engineering principles to support the real-time seismic instrumentation and monitoring of buildings, bridges, dams and various structures. Duties include, but are not limited to:

A. **SPECIFIC ACTIVITIES: ESSENTIAL / MARGINAL FUNCTIONS**

- **ESSENTIAL FUNCTIONS**

- **35% Development and Support of Engineering Procedures**

Assist with the development and support of engineering procedures that will enable the California Strong Motion Instrumentation Program (CSMIP) to process real-time acceleration response data from structures (e.g., buildings, bridges, wharves, and dams) at its Real-Time Data Center. Including, but not limited to, procedures to be used for structural response data analysis that will provide estimates and visualization of engineering demand parameters (e.g., inter-story drift) and dynamic response properties (e.g., modal periods, shapes, and damping) of instrumented structures. Develop procedures which enable and promote the visualization and interpretation of structural response. Make recommendations on engineering problems encountered as procedures are developed and prepare complete and comprehensive technical reports on procedure development and support activities.

- **20% Strong-Motion Data Analysis**

Interpret and analyze strong-motion records of structures which will be used to further the understanding of the seismic response of structures. Facilitate the utilization of

real-time strong-motion data to be used in improving seismic design codes and practices, and post-earthquake response and recovery.

- **20% Instrumentation of Structures**

Evaluate candidate structures for seismic instrumentation by the CSMIP. Assist in obtaining necessary design plans, as well as preparing and organizing documentation for the instrumented structures. Study design plans and determine locations for strong-motion sensors to be installed so measurement objectives are achieved. Assist in reviewing strong motion data after an earthquake and responding to inquiries from strong motion data users regarding response data.

- **15% Data Utilization Project**

Review proposals received as part of the CSMIP Data Utilization Project, and serve on panels to assess, rank, and make funding decisions regarding these proposals. Review and provide feedback on progress and final reports received from the funded data utilization projects.

- **MARGINAL FUNCTIONS**

- **5% Miscellaneous**

Attend project meetings on behalf of the unit or the program and participate in outreach activities. Performs other classification-related duties as assigned.

- **5% Administrative**

Performs administrative duties including, but not limited to: adheres to Department policies, rules and procedures; submits administrative requests including leave, overtime, travel, and training in a timely and appropriate manner; accurately reports time in the Tempo timekeeping system; and submits timesheets by the due date.

B. **SUPERVISION RECEIVED**

The Engineer, Civil reports directly to and receives the majority of assignments from the Senior Civil Engineer, Supervisor of the Data Utilization and Structure Response Unit of the CSMIP.

C. **SUPERVISION EXERCISED**

NONE

D. **ADMINISTRATIVE RESPONSIBILITIES FOR SUPERVISORS AND MANAGERS**

NONE

E. **PERSONAL CONTACTS**

- Routinely interacts with other California Geological Survey (CGS) staff.
- Interacts with owners and/or tenants of selected buildings, to request permission for CSMIP to instrument their buildings.
- Interacts with design structural engineers to develop sensor layouts, and with geotechnical engineers to develop acceptable locations for reference ground stations.
- Contacts and interactions may be via personal interaction, written correspondence, telephone, and/or e-mail.

F. **ACTIONS AND CONSEQUENCES**

If these functions are not adequately performed, consequences may include, but are not limited to:

- CGS will not meet its contractual obligations to implement and maintain a real-time monitoring system for structures.
- If sensors are located at incorrect locations on a structure, false measurements may be obtained, or the measurements may be inadequate to characterize the seismic response of a structure.

G. **WORKING CONDITIONS/PHYSICAL REQUIREMENTS**

- Travel via private or public transportation (e.g. automobile, airplane, etc.), including overnight travel, to attend meetings, perform on-site reviews, or for trainings.
- In performing field work, it may be required to climb ladders and/or wear personal protective equipment such as hard hat, construction boots, life vest and safety eyewear.
- Occasional operation of State owned or rental cars to field work or meetings.
- Work in an office environment in a high-rise building.
- Sitting at a desk during core office hours using a desktop computer, keyboard, mouse, monitor, printers and plotters under artificial lighting for prolonged periods of time.
- Use of multi-line telephone console or a cordless telephone.
- Moving about the office and standing or sitting during in person meetings.
- Bending and stooping to retrieve and replace files and records.

H. **OTHER INFORMATION**

- Telework may be available for this position in accordance with the Department of Conservation's Telework Policy and procedures.

I have read and understand the duties listed above and I can perform these duties with or without reasonable accommodation (if you believe reasonable accommodation is necessary, discuss your concerns with your supervisor).

Employee Signature	Employee Printed Name	Date
---------------------------	------------------------------	-------------

I have discussed the duties of this position with and have provided a copy of this duty statement to the employee named above.

Supervisor Signature	Supervisor Printed Name	Date
-----------------------------	--------------------------------	-------------